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AN IMPROVED TECHNIC OF VACCINATION.*

During the past four years in the children's clinic of Cooper Medical College, over eleven hundred children have been vaccinated with the following simple technic:

The area to be vaccinated is thoroughly cleansed with green soap and alcohol, and then allowed to dry. A piece of sterile gauze, consisting of two layers, is placed over the operator's index finger, and the area is rubbed with considerable pressure, from above downward until the superficial epithelium is removed, and serum exudes from the surface. In this manner an area a square inch in diameter can be prepared in a very short time, no blood flows, there is absolutely no discomfort to the child, and a clean red surface is left for the application of the vaccine. After this is done the point covered with the vaccine is applied, rubbed for about thirty seconds over the denuded area, and the excoriation left uncovered to dry.

In this series of cases no dressings, such as shields of any kind, tight bandages, or adhesive plaster were used but a simple dressing applied as follows: A piece of sterile gauze six inches square, and four or five layers in thickness is placed over the vaccinated area, and pinned to the overlying garment, or undershirt. The parents are directed to place a clean piece of gauze over the wound every night, with no bandages or applications, and at the end of a week the child is brought back to the clinic for observation.

The advantages of this method are that there is, no instrument used for excoriation, which will frighten the child, pain from the denudation of the area is eliminated, and a large, clean, bloodless area is prepared in a very short space of time. The use of shields and tight bandages produce congestion and often infection, and once an infected area is bound down by a tight and dirty shield serious complications result. The loose dressing eliminates infection, is clean, and easily changed daily.

Out of eleven-hundred cases treated in this way at the clinic, only one infection occurred, and this we attributed to a shield bound down by adhesive plaster, put on the child's arm after he left the clinic.

H. H. Y.

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ANTITYPHOID VACCINATION

Experiments on the immunization of animals with typhoid bacilli were reported in 1892, and in 1896 Pfeiffer and Kolle, in Germany, immunized 2 men with dead cultures. About the same time Sir A. E. Wright accomplished the same feat, and as a result of his indefatigable energies in the pursuit of this work, the method was introduced as a prophylactic measure for all soldiers going to the British possessions. The results, however gratifying, were not up to expectations, so that although over 150,000 soldiers had been vaccinated by 1902 and the incidence of the disease reduced one-half, and the mortality two-thirds, the method was discontinued because of some severe reactions following injections. It was later shown that certain defects in the preparation of the vaccines accounted for the relatively poor showing. In 1904, a commission having been appointed to investigate the whole subject, vaccination was re-introduced in the army.

The results of inoculation of the German South African troops were far better, but it was Leischman's report in 1907 of the excellent results obtained in the British Colonial troops, that commanded the attention of all engaged in the field of sanitation. Even the United States Army took official notice, Major Russell in 1908 being sent to England to study the methods and results of Colonel Leischman. On his return, his report was submitted to a board of eight medical officers of which he acted as recorder, and the Surgeon-General as president. The other members were Victor Vaughan, Wm. Councilman, John Musser, Alex. Lambert, Simon Flexner and Wm. Thayer. The board recommended the introduction of antityphoid vaccination in the U. S. Army, and the Surgeon-General immediately instructed medical officers to urge its trial by all volunteers, as well as in their own and the nursing corps. By the first of March, 1909, in a laboratory specially fitted up for the manufacture of the typhoid vaccine, in Washington, the immunization of volunteers was begun.

Major Russell (*Bost. Med. and Surg. Journ.*, Jan. 5, 1911), reports 14,000 persons vaccinated, approximately one-sixth of the force. Of those vaccinated, six have since then been treated for typhoid fever, though in only one was the diagnosis confirmed by laboratory methods. Two of the cases were so mild as to cast a reasonable doubt upon the diagnosis. All six recovered. Among the remainder of the army, during the same length of time, there have been 418 cases, with 32 deaths. Had the entire army been vaccinated, the same rate of incidence would have given only 36 cases rather than 418, a number 15 times smaller.

Such a report of results obtained in our own army, by men working in our very midst, should certainly lead to a more extended trial of the method in our own civil population. As Russell states: "In civil life there are many occasions on which antityphoid vaccine may be used with advantage, as in hospitals receiving typhoid cases. This has